

SCHOOL OF CIVIL ENGINEERING

JOINT HIGHWAY
RESEARCH PROJECT

JHRP-76-9

TRAFFIC SPEED REPORT
NO. 95

A. A. Gadallah
G. K. Stafford



PURDUE
INDIANA STATE
UNIVERSITY
HIGHWAY COMMISSION

TRAFFIC SPEED REPORT NO. 95

TO: J. F. McLaughlin, Director March 16, 1976
Joint Highway Research Project

FROM: H. L. Michael, Associate Director File: 8-3-3
Joint Highway Research Project Project: C-36-10C

The attached Progress Report No. 95 on Traffic Speeds is the report of the Oct.-Dec. 1975 quarterly study of free-flowing automobile and truck speeds on rural, tangent, level sections of Interstate, 4-lane and 2-lane and on urban interstate highways in Indiana. The report has been prepared by Mr. A. A. Gadallah, a Graduate Instructor in Research on our staff, under the direction of Professor H. L. Michael. The data were collected by Mr. G. K. Stafford and a number of graduate assistants on our staff.

The results indicate a decrease of about 1.0 mph in the average speed of all passenger cars and heavy trucks to that of the 1975 Annual Study. This decrease occurred totally on the rural Interstate system where an expanded enforcement campaign occurred during the period.

Copies of the report will be sent to the Federal Highway Administration and the ISHC for review, comment and acceptance as fulfillment of the objectives of this HPR Part I Study. Copies of the report upon acceptance by FHWA and ISHC are requested for release to the Indiana State Police, the Indiana Traffic Safety Council and the Indiana Office of Traffic Safety as a normal procedure for these reports.

Respectfully submitted,

Harold K. Moulton

Harold L. Michael
Associate Director

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16. Abstract This report is another on the continuing study of speeds of vehicles on Indiana Highways. Observations of spot speeds were taken on interstate, four-lane and two-lane highways throughout the state during the months of October and November 1975.			
Analysis of the speeds showed the overall average speed for all vehicles was 57.4 mph. The overall average speed for passenger cars and all trucks was 57.8 mph and 56.3 mph, respectively. These overall average speeds are 1.0 mph, 0.9 mph and 1.1 mph less for all vehicles, passenger cars, and all trucks, respectively, as compared to the data collected in July-September 1975 (speed report no. 94).			
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Progress Report

TRAFFIC SPEED REPORT NO. 95

by

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and

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Joint Highway Research Project

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in cooperation with the
Indiana State Highway Commission
and the

U.S. Department of Transportation
Federal Highway Administration

The opinions, findings and conclusions expressed in this publication are those of the authors and not necessarily those of the Federal Highway Administration.

Purdue University
West Lafayette, Indiana
March 16, 1976

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TRAFFIC SPEED REPORT NO. 95

This report is an analysis of spot speed observations made during October and November 1975. All observations were made of free-flowing vehicles on level, tangent sections of rural and urban highways during daylight and under favorable conditions. Seven stations were studied from the same locations on selected Federal and State highways as used in the previous annual studies.

Stations were classified as two-lane, four-lane, rural interstate, or urban interstate highways. A representative sample of spot speeds was obtained at each station in each classification. The site locations were as follows: (See Figure A)

Rural Interstate Highways

1. I-69	3.3 miles south of Junction of SR 18
2. I-65	1.0 miles west of Junction of SR 334
*3. I-74	1.0 miles east of Junction of Post Road
*4. I-65	7.5 miles north of Junction of SR 160

Four Lane Highways

5. U.S. 31	1.2 miles south of Junction of SR 38
*6. U.S. 30	2.0 miles east of Junction of SR 49
*7. U.S. 41	1.0 miles north of South Junction of SR 2
8. U.S. 52	1.0 miles west of Klondike

Two Lane Highways

9. U.S. 35	1.5 miles east of Junction of I-69
*10. S.R. 43	2.0 miles south of Chalmers
*11. U.S. 231	1.0 mile south of Junction of SR 234
12. S.R. 25	0.7 miles west of Americus

Urban Interstate Highways

*13. I-94	Near Burr
14. I-65	East of White River

*Stations used in this study.

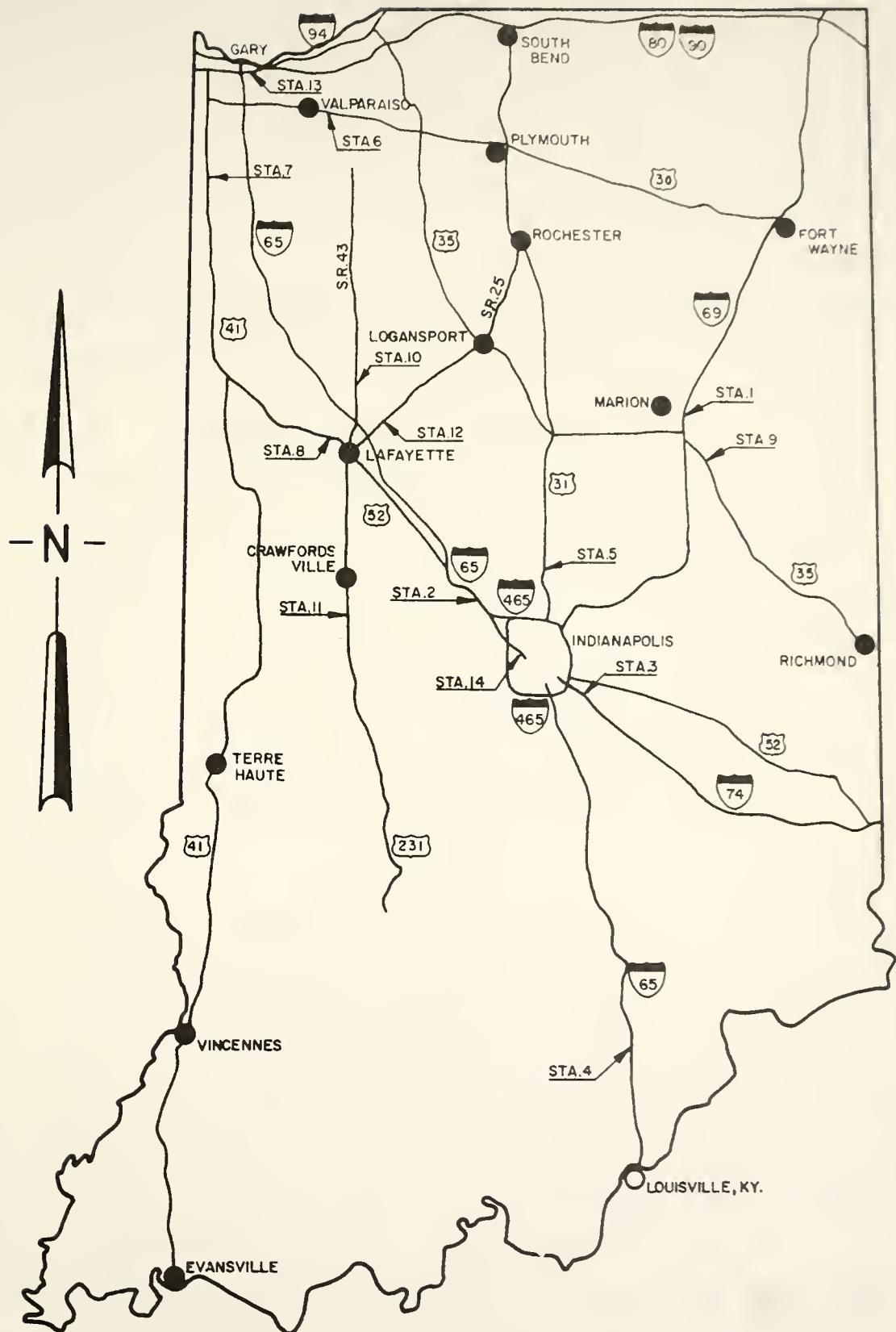


FIGURE A LOCATIONS OF SPEED-STUDY STATIONS

The vehicles were classified as Indiana or Non-Indiana Passenger Cars and Light (less than 5000 lbs. gross weight) or Heavy (equal to or more than 5000 lbs. gross weight) Trucks. The analysis was performed as classified and combined, passenger cars or trucks.

The maximum speed limit in Indiana is 55 miles per hour, both on Interstate and other rural highways.

Equipment and Field Procedure

The observations for this study were obtained by use of an "Electromatic" Radar Speed Meter. The meter was placed approximately four feet from the edge of the pavement at angles less than 10° with the highway center line. No corrections of speeds were necessary at these small angles. At the beginning of the study the accuracy of the meter was checked and any constant discrepancy of readings was corrected accordingly.

RESULTS OF ANALYSIS

The data collected were analyzed and are summarized in Tables 1 to 7 in the Appendix. Tables 8, 9 and 10 summarize the data for rural interstate, four lane and two lane highways, respectively. Table 11 is the summary for all highways. Tables 12, 13 and 14 are summaries in an FHWA format which is desired. The average speed for each classification of vehicles on each type of highway for this study was as follows:

	<u>Urban</u>	<u>Interstate</u>	<u>Rural</u>	<u>Other</u> <u>Four Lane</u> <u>Rural</u>	<u>Two Lane</u> <u>Rural</u>
<u>Passenger Cars:</u>					
Indiana	59.11		56.80	58.20	57.45
Non-Indiana	58.75		57.13	58.65	57.05
All Passenger Cars	58.98		56.92	58.32	57.42
85 Percentile (all)	62.29		60.35	62.26	62.48
<u>Trucks:</u>					
Less than 5000 lbs.	61.00		55.87	55.98	56.36
5000 lbs. or more	58.07		56.49	55.72	55.34
<u>All Vehicles:</u>					
Average	58.81		56.74	57.61	56.98
85 Percentile	62.09		60.17	61.60	62.34

The percent of vehicles exceeding the speed limit (55 mph) for each classification of vehicles and each type of highway was as follows:

	<u>Urban</u>	<u>Interstate</u>	<u>Rural</u>	<u>Other</u> <u>Four Lane</u> <u>Rural</u>	<u>Two Lane</u> <u>Rural</u>
<u>Passenger Cars:</u>					
Indiana	80.6		63.3	70.9	63.6
Non-Indiana	78.7		65.4	79.1	65.8
All Passenger Cars	79.9		64.1	73.1	63.8
<u>Trucks:</u>					
Less than 5000 lbs.	100.0		53.3	61.4	57.6
5000 lbs. or more	78.5		63.4	57.1	55.4
<u>All Vehicles:</u>	80.0		62.9	69.0	61.7

The percent of vehicles traveling more than 5 mph above the speed limit (exceeding 60 mph) for each case was as follows:

	<u>Urban</u>	<u>Interstate</u>	<u>Rural</u>	<u>Other</u>	<u>Four Lane</u>	<u>Two Lane</u>
				<u>Rural</u>	<u>Rural</u>	<u>Rural</u>
<u>Passenger Cars:</u>						
Indiana	34.5		16.4		30.5	26.9
Non-Indiana	34.5		19.3		33.3	21.0
All Passenger Cars	34.5		17.5		31.3	26.5
<u>Trucks:</u>						
Less than 5000 lbs.	54.5		13.0		22.8	22.2
5000 lbs. or more	25.3		11.8		11.1	20.6
<u>All Vehicles:</u>	32.7		16.0		26.5	25.1

The percent of vehicles traveling more than 10 miles per hour above the speed limit (exceeding 65 mph) for each case was as follows:

	<u>Urban</u>	<u>Interstate</u>	<u>Rural</u>	<u>Other</u>	<u>Four Lane</u>	<u>Two Lane</u>
				<u>Rural</u>	<u>Rural</u>	<u>Rural</u>
<u>Passenger Cars:</u>						
Indiana	4.8		2.4		5.3	9.1
Non-Indiana	5.7		4.8		7.8	5.3
All Passenger Cars	5.2		3.3		6.0	8.8
<u>Trucks:</u>						
Less than 5000 lbs.	9.1		1.3		1.8	10.1
5000 lbs. or more	1.8		2.5		1.8	7.5
<u>All Vehicles:</u>	4.5		3.0		4.8	8.8

Summary and Conclusions

The overall average speed for all vehicles and passenger cars in this study was found to be 57.4 mph and 57.8 mph, respectively. The overall average speeds for heavy trucks and for all trucks were found to be the same and equal to 56.3 mph. These overall average speeds are 1.0 mph, 0.9 mph, and 1.1 mph less for all vehicles, passenger cars, and all trucks, respectively, than the results of July-Sept. 1975. Table A presents a comparison of the overall speed results with that of 1975 and 1974 annual studies. The 85th percentile speed of passenger cars decreased 1.6 mph from July-September 1975 on all highways to 61.8 mph.

A comparison of October-November 1975 speed data with that for other recent periods for several types of highway for passenger cars and trucks is shown in Tables B, C and D. The data for the May-June 1975 and Oct.-Nov. 1975 periods are for only a portion of the stations.

The reduction in the average speeds and 85th percentile speeds occurred mainly on interstate highways (as compared to the July-Sept. 1975 study). On the other four-lane highways a slight increase occurred for the average speeds and the 85th percentile speeds, and it was about the same on two-lane highways.

In general, the decrease in the average speeds for the different vehicle classifications and in the 85th percentile rural interstate speeds can probably be attributed to an expanded speed enforcement program on the rural interstates which occurred during the period and which was well publicized.

Although the average speeds and 85th percentile speeds on urban interstate highways were about 2 mph more than those on rural interstate highways, this result is not conclusive as the data for urban interstates was obtained from only a single station.

TABLE A
COMPARISON OF THE OVERALL SPEED RESULTS

	Oct.-Nov. 1975	July-Sept. 1975	June-Sept. 1974
<u>Average:</u>			
All Passenger Cars	57.8	58.7	57.8
Heavy Trucks	56.3	57.4	55.2
All Trucks	56.3	57.4	55.6
<u>85 Percentile:</u>			
All Passenger Cars	61.8	63.4	62.6
Heavy Trucks	60.5	62.5	59.7
All Trucks	60.7	62.5	60.2
<u>15 Percentile:</u>			
Heavy Trucks	51.2	51.5	49.2

TABLE B
AVERAGE SPEEDS ON INTERSTATE HIGHWAYS (RURAL)

	Oct.-Nov. 1975	July-Sept. 1975	May-June 1975	June-Sept. 1974
<u>Passenger Cars:</u>				
Indiana	56.8	59.7	57.4	58.3
Non-Indiana	57.1	60.2	57.4	59.3
All Passenger Cars	56.9	59.9	57.4	58.7
85 Percentile (all)	60.4	64.2	60.9	62.6
<u>Trucks:</u>				
Less than 5000 lbs.	55.9	58.2	56.6	56.7
5000 lbs. or more	56.5	59.3	56.7	56.4

TABLE C
AVERAGE SPEEDS ON OTHER FOUR-LANE HIGHWAYS

	Oct.-Nov. 1975	July-Sept. 1975	May-June 1975	June-Sept. 1974
<u>Passenger Cars:</u>				
Indiana	58.2	57.6	58.6	58.0
Non-Indiana	58.7	58.1	58.4	57.9
All Passenger Cars	58.3	57.7	58.6	58.0
85 Percentile (all)	62.3	62.0	63.3	63.1
<u>Trucks:</u>				
Less than 5000 lbs.	56.0	56.4	56.9	56.8
5000 lbs. or more	55.7	55.9	55.4	54.4

TABLE D
AVERAGE SPEEDS ON TWO-LANE HIGHWAYS

	Oct.-Nov. 1975	July-Sept. 1975	May-June 1975	June-Sept. 1974
<u>Passenger Cars:</u>				
Indiana	57.5	57.2	57.1	56.8
Non-Indiana	57.1	57.4	57.7	55.9
All Passenger Cars	57.4	57.8	57.1	56.7
85 Percentile (all)	62.5	62.5	62.3	61.8
<u>Trucks:</u>				
Less than 5000 lbs.	56.4	57.5	55.6	55.3
5000 lbs or more	55.4	56.2	53.6	54.5

APPENDIX

Speed Data (Tables 1 to 14)

TABLE 2 SPEED DATA

Station	4	Highway 165	Type of Surface	Location	7.5 Mile North of Junction of S.R. 160
No. of Lanes	4		Concrete		
This Observation					Last Previous Observation (Speed Report No. <u> </u>)
Date <u>11-5-75</u>					Date <u>8-25-75</u>
Time <u>12:32 - 1:50 PM</u>					Time <u>1:50 - 3:50 PM</u>

OBSERVATION	PASSENGER CARS						TRUCKS					
	All			Indiana			Non-Indiana			All		
	Last	Present	Last	Last	Present	Last	Last	Present	Last	Last	Present	Last
No. of vehicles obs.	283	321	126	139	157	182	115	115	51	30	64	85
Ave. speed (m.p.h.)	60.10	56.98	59.65	56.80	60.46	57.11	58.27	55.65	57.90	56.23	58.56	55.45
Standard deviation	5.055	4.041	4.990	3.717	5.093	4.278	4.541	3.746	4.993	3.901	4.163	3.692
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49 m.p.h.	1.41	1.25	1.59	1.44	1.27	1.10	2.61	2.61	3.92	0.0	1.56	3.53
54 m.p.h.	13.07	28.35	15.08	29.50	11.46	27.47	19.13	34.78	19.61	33.33	18.75	35.29
59 m.p.h.	44.17	75.39	50.00	78.42	39.49	73.08	64.35	88.70	70.59	83.33	59.38	90.59
64 m.p.h.	78.80	95.64	81.75	97.12	76.43	94.51	90.43	96.52	90.20	93.33	90.63	97.65
69 m.p.h.	96.82	99.38	96.83	100.0	96.82	98.90	92.13	100.0	98.04	100.0	100.0	100.0
74 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
79 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.	143	164	72	85	71	79	56	58	29	17	27	41
Average speed	60.78	57.89	59.79	57.27	61.79	58.56	59.66	56.62	59.52	56.71	59.81	56.59
No. of vehicles obs.	142	157	54	54	86	103	59	57	22	13	37	44
Average speed	59.40	56.02	59.46	56.06	59.36	56.00	56.95	54.67	55.77	55.62	57.65	54.39



TABLE 3 SPEED DATA

Station	6	Highway	U.S. 30	Location	2 Miles East of Junction of S.R. 49
No. of Lanes	4	Type of Surface	Asphalt Concrete	Weather	Clear
This Observation				Last Previous Observation (Speed Report No. <u> </u>)	
Date	10-29-75	Date	9-17-75		
Time	10:30-12:10 PM	Time	10:46 - 1:46 PM		

OBSERVATION	PASSENGER CARS						TRUCKS			
	All			Indiana			All		<5000 lbs.	
	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent
No. of vehicles obs.	287	281	197	205	90	76	134	112	32	12
Ave. speed (m.p.h.)	58.65	58.28	58.36	58.13	59.08	58.71	55.96	57.70	56.58	58.18
Standard deviation	4.624	4.531	4.979	4.544	3.721	4.495	4.814	3.865	6.520	4.274
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.35	0.0	0.51	0.0	0.0	0.0	1.49	1.79	6.25	0.0
49 m.p.h.	3.83	3.56	5.08	3.90	1.11	2.63	5.97	4.46	9.38	8.33
54 m.p.h.	16.03	19.22	18.78	21.46	10.00	13.16	20.15	33.04	28.13	25.00
59 m.p.h.	58.54	62.28	60.41	62.44	54.44	61.84	58.21	84.82	56.25	65.67
64 m.p.h.	89.90	92.53	88.83	92.68	92.22	92.11	92.54	99.11	87.50	100.0
69 m.p.h.	99.30	98.93	99.49	99.02	98.89	98.68	100.0	100.0	100.0	100.0
74 m.p.h.	99.65	100.0	99.49	100.0	100.0	100.0	100.0	100.0	100.0	100.0
79 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.	142	140	83	95	59	45	75	57	18	6
Average speed	58.73	58.45	58.51	58.25	59.05	58.87	57.92	56.39	58.33	58.09
No. of vehicles obs.	145	141	114	110	31	31	59	55	14	6
Average speed	58.57	58.12	58.42	58.02	59.13	58.48	58.14	55.53	57.64	54.83

TABLE 4 SPEED DATA

Station	7	Highway	U.S. 41	Type of Surface	Asphalt	Concrete	Location 1 Mile North of South Junction of S.R. 2
This Observation							Weather Clear Dry
Date	10-27-75						Last Previous Observation (Speed Report No. <u> </u>)
Time	10:50 AM - 12:20 PM						Date <u>9-4-75</u>
							Time <u>10:28 - 2:50 PM</u>

OBSERVATION	PASSENGER CARS						TRUCKS		
	All			Indiana	Non-Indiana	All	<5000 lbs.		>5000 lbs.
	Last	Present	Last	Present	Last	Present	Last	Present	Present
No. of vehicles obs.	291	288	219	72	77	113	108	38	45
Ave. speed (m.p.h.)	56.80	58.35	56.90	58.27	56.49	58.60	53.81	55.97	55.82
Standard deviation	6.364	5.636	6.508	5.692	5.939	5.509	6.944	5.929	7.600
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.34	0.0	0.0	0.0	0.0	0.0	0.88	0.0	0.0
44 m.p.h.	3.09	2.35	2.74	4.7	4.17	0.0	8.85	5.56	10.53
49 m.p.h.	8.25	6.21	9.13	4.27	5.56	7.79	21.24	14.81	18.42
54 m.p.h.	34.71	21.88	32.42	22.75	41.67	19.48	52.21	34.26	52.63
59 m.p.h.	72.16	61.11	72.15	62.56	72.22	57.14	82.30	76.85	78.95
64 m.p.h.	91.07	89.58	92.24	90.05	87.50	88.31	94.69	97.22	92.11
69 m.p.h.	97.59	95.83	96.80	95.73	100.0	96.10	98.23	99.07	97.37
74 m.p.h.	99.31	98.96	99.09	98.58	100.0	100.0	100.0	100.0	100.0
79 m.p.h.	99.31	99.65	99.09	99.53	100.0	100.0	100.0	100.0	100.0
84 m.p.h.	99.66	100.0	99.54	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	99.66	100.0	99.54	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.	149	146	118	109	31	37	57	58	17
Average speed	55.67	59.32	55.81	59.47	55.16	58.89	50.75	56.71	49.06
No. of vehicles obs.	142	142	101	102	41	40	56	50	21
Average speed	57.98	57.36	58.18	56.98	57.49	58.32	56.93	54.34	57.95

TABLE 5 SPEED DATA

Station 10 Highway S.R. 43 Location 2 Miles South of Chalmers
 No. of Lanes 2 Type of Surface Asphalt Concrete
 This Observation 11-4-75 Previous Observation (Speed Report No. —)
 Date 7-10-75 Date 7-10-75
 Time 9:05-12:05 p.m. Time 10:15-12:45 p.m.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All	Indiana	Non-Indiana	All	<5000 lbs.	>5000 lbs.	All	Present	Last	Present	Last	Present
No. of vehicles obs.	286	297	251	284	35	13	286	112	59	52	54	60
Ave. speed (m.p.h.)	59.42	58.74	59.59	58.73	58.14	59.00	59.42	57.77	59.83	58.52	59.43	57.12
Standard deviation	5.700	5.933	5.871	6.001	4.124	4.340	5.700	6.024	7.288	6.153	6.347	5.883
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.35	0.67	0.40	0.70	0.0	0.0	0.35	0.68	1.69	1.92	0.0	0.33
49 m.p.h.	3.85	4.71	4.38	4.93	0.0	0.0	3.85	6.25	11.86	3.85	5.56	8.33
54 m.p.h.	19.23	20.88	18.73	21.13	22.86	15.38	19.23	27.68	16.95	23.08	24.07	31.67
59 m.p.h.	51.57	60.94	49.40	60.92	68.51	61.54	51.57	67.86	49.15	67.31	53.70	68.33
64 m.p.h.	86.36	85.86	85.26	85.56	94.29	92.31	86.36	86.61	86.36	84.62	74.07	88.33
69 m.p.h.	96.50	95.96	96.41	95.77	97.14	100.0	96.50	98.21	93.22	96.15	94.44	100.0
74 m.p.h.	98.60	99.33	98.41	99.30	100.0	100.0	98.60	99.11	96.61	98.08	100.0	100.0
79 m.p.h.	99.65	99.33	99.60	99.30	100.0	100.0	99.65	100.0	98.31	100.0	100.0	100.0
84 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.	141	142	124	137	17	5	141	57	33	27	29	30
Average speed	60.33	58.65	60.60	58.61	58.35	59.80	60.33	57.44	58.73	58.93	60.14	56.10
No. of vehicles obs.	145	155	127	147	18	8	145	55	26	25	25	30
Average speed	58.52	58.82	58.61	58.84	57.94	58.50	58.52	58.11	61.23	58.08	58.60	58.13

TABLE 6 SPEED DATA

Station	11	Highway	U.S. 231	Location	1.0 Mile South of Junction S.R. 234
No. of Lanes	2	Type of Surface	Asphalt Concrete	Weather	Clear
This Observation					
Date	10-30-75			Last Previous Observation (Speed Report No.)	
Time	9:55-1:40 p.m.			Date	8-26-75
				Time	10:40-1:30 p.m.

OBSERVATION	PASSENGER CARS						TRUCKS		
	All			Indiana		Non-Indiana	All		<5000 lbs.
	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	>5000 lbs.
No. of vehicles obs.									
Ave. speed (m.p.h.)	57.35	56.03	57.34	56.03	57.94	56.04	56.12	53.76	56.67
Standard deviation	5.402	5.384	5.392	5.471	5.555	4.495	6.119	6.844	6.541
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.36	0.0	0.39	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	.36	.36	.41	.39	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	1.08	2.14	1.22	2.35	0.0	0.0	3.45	5.56	2.08
49 m.p.h.	7.17	10.00	7.35	10.20	5.88	8.00	13.79	28.70	14.58
54 m.p.h.	29.39	36.79	28.98	36.86	32.35	36.00	34.48	52.78	29.17
59 m.p.h.	69.53	76.43	68.57	75.69	76.47	84.00	71.55	81.48	72.92
64 m.p.h.	89.96	93.21	89.80	92.94	91.18	96.00	94.83	92.59	93.75
69 m.p.h.	98.57	100.0	99.18	100.0	94.12	100.0	98.28	98.15	95.83
74 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	99.14	100.0	97.92
79 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.	139	153	124	141	15	12	60	54	24
Average speed	58.51	57.00	58.69	57.05	57.07	56.42	57.02	54.98	58.37
No. of vehicles obs.	140	127	121	114	19	13	56	54	25
Average speed	56.20	54.86	55.96	54.76	57.74	55.69	55.16	52.54	54.96

TABLE 7 SPEED DATA

Station 13 Highway I-94 Type of Surface Asphalt Concrete

No. of Lanes 6 Location East of Burr

This Observation Date 9-16-75 Time 10:20-12:30 p.m.

Previous Observation (Speed Report No. 13)

Date 11-6-75 Time 10:55-11:30 a.m.

		PASSENGER CARS				TRUCKS							
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
OBSERVATION		Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.		312	328	172	206	140	122	109	118	23	11	86	107
Ave. speed (m.p.h.)		60.94	58.98	60.87	59.11	61.02	58.75	59.97	58.35	60.57	61.00	59.81	58.07
Standard deviation		4.607	3.918	5.210	3.712	3.752	4.251	3.332	4.530	3.116	3.162	3.387	4.572
24 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.		0.32	0.0	0.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49 m.p.h.		1.28	0.30	2.33	0.0	0.0	0.82	0.0	2.54	0.0	0.0	0.0	2.80
54 m.p.h.		6.41	13.11	8.72	11.17	3.57	16.39	6.42	17.80	0.0	0.0	8.14	19.63
59 m.p.h.		34.62	53.66	37.21	53.40	31.43	54.10	38.53	56.78	34.78	18.18	39.53	60.75
64 m.p.h.		80.45	92.68	80.23	92.72	80.71	92.62	93.58	94.92	95.65	81.82	93.02	96.26
69 m.p.h.		97.12	99.70	95.93	100.0	98.57	99.18	100.0	99.15	100.0	100.0	100.0	99.07
74 m.p.h.		99.04	100.0	98.26	100.0	100.0	100.0	100.0	99.15	100.0	100.0	100.0	99.07
79 m.p.h.		99.68	100.0	99.42	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 m.p.h.		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.		146	162	75	92	71	70	55	55	14	4	41	51
Average speed		60.70	58.60	60.48	58.64	60.93	58.56	58.95	57.18	59.29	60.25	58.83	56.94
No. of vehicles obs.		166	166	97	114	69	52	54	63	9	7	45	56
Average speed		61.15	59.34	61.18	59.49	61.12	59.02	61.02	59.37	62.56	61.43	60.71	59.11

TABLE 8 SPEED DATA

Station 3,4	Highway	Interstate, Rural Location
No. of Lanes	Type of Surface	
This Observation		Weather
Date		Previous Observation (Speed Report No.)
Time		Date
		Time

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent
No. of vehicles obs.	1155	601	672	373	483	228	468	238	162	77	306	161
Ave. speed (m.p.h.)	59.94	56.92	59.73	56.80	60.23	57.13	58.89	56.29	58.17	55.87	59.27	56.49
Standard deviation	4.821	4.017	4.827	3.936	4.802	4.146	4.606	3.906	4.591	4.073	4.575	3.820
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.09	0.17	0.0	0.27	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49 m.p.h.	1.30	1.83	1.49	2.41	1.04	.88	1.92	2.94	3.09	3.90	1.31	2.48
54 m.p.h.	11.34	27.45	12.20	27.88	10.14	26.75	15.60	28.57	18.52	31.17	14.05	27.33
59 m.p.h.	47.19	76.87	49.55	78.82	43.89	73.68	56.84	84.03	64.20	84.42	52.94	83.85
64 m.p.h.	84.59	95.84	86.16	96.78	82.40	94.30	88.68	95.80	91.36	94.81	87.25	96.27
69 m.p.h.	96.97	99.33	96.88	99.46	97.10	99.12	98.29	100.0	98.77	100.0	98.04	100.0
74 m.p.h.	99.39	99.83	99.26	99.73	99.59	100.0	100.0	100.0	100.0	100.0	100.0	100.0
79 m.p.h.	99.91	100.0	99.85	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 m.p.h.	99.91	100.0	99.85	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

All Vehicles
of vehicles
traveling at or
less than

All Vehicles

TABLE 9 SPEED DATA

Station 6, 7	Highway 4-lane, rural	Location
No. of Lanes	Type of Surface	
This Observation		Weather
Date		Last Previous Observation (Speed Report No.)
Time		Date
		Time

OBSERVATION	PASSENGER CARS						TRUCKS												
	All			Indiana			Non-Indiana			All			<5000 lbs.			>5000 lbs.			
	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	
No. of vehicles obs.	1143	569	887	416	256	153	490	220	186	57	304	163							
Ave. speed (m.p.h.)	57.66	58.32	57.55	58.20	58.07	58.65	56.06	55.79	56.37	55.98	55.87	55.72							
Standard deviation	5.494	5.116	5.609	5.153	5.067	5.015	6.523	4.978	6.687	5.563	6.425	4.773							
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
39 m.p.h.	.26	0.0	.23	0.0	.39	0.0	.39	0.0	2.45	.45	2.15	0.0	2.63	.61					
44 m.p.h.	1.40	.18	1.47	.24	1.17	0.0	4.90	3.64	4.30	3.51	5.26	3.68							
49 m.p.h.	6.47	4.39	7.10	4.09	4.30	5.23	13.88	9.55	13.98	14.04	13.82	7.98							
54 m.p.h.	25.28	20.56	25.82	22.12	23.44	16.34	36.53	33.64	38.17	31.58	35.53	34.36							
59 m.p.h.	65.27	61.69	66.29	62.50	61.72	59.48	69.80	80.91	68.82	71.93	70.39	84.05							
64 m.p.h.	91.16	91.04	91.54	91.35	89.84	90.20	93.06	98.18	90.32	98.25	94.74	98.16							
69 m.p.h.	98.51	97.36	98.42	97.36	98.83	97.39	98.16	99.55	97.31	100.0	98.68	99.39							
74 m.p.h.	99.65	99.47	99.55	99.28	100.0	100.0	99.80	100.0	99.46	100.0	100.0	100.0							
79 m.p.h.	99.83	99.82	99.77	99.76	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0							
84 m.p.h.	99.91	100.0	99.89	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0							
89 m.p.h.	99.91	100.0	99.89	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0							

All Vehicles
traveling at or less
than

TABLE 10 SPEED DATA

Station 10, 11	Highway 2-lane, Rural	Location	This Observation			Last Previous Observation (Speed Report No. ____)			Weather		
No. of Lanes	Type of Surface		Date	Date	Time			Time			

OBSERVATION	PASSENGER CARS						TRUCKS				
	All	Indiana	Non-Indiana	All	Pres-ent	Last	<5000	1bs.	>5000	1bs.	Pres-ent
No. of vehicles obs.	1140	577	1019	539	121	38	476	220	240	99	236
Ave. speed (m.p.h.)	57.76	57.42	57.80	57.45	57.42	57.05	56.88	55.80	57.52	56.36	56.22
Standard deviation	5.460	5.828	5.512	5.908	5.006	4.609	6.125	6.731	6.257	6.669	5.931
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.18	0.17	0.20	0.19	0.0	0.0	0.21	1.36	.42	1.01	0.0
44 m.p.h.	1.14	1.39	1.18	1.48	.83	0.0	1.89	4.09	1.67	3.03	2.12
49 m.p.h.	4.74	7.28	5.00	7.42	2.48	5.26	10.92	17.27	10.42	15.15	11.44
54 m.p.h.	27.37	28.60	26.89	28.57	31.40	28.95	32.56	40.00	25.83	36.36	39.41
59 m.p.h.	66.93	68.46	66.14	67.90	73.55	76.32	69.54	74.55	68.75	73.74	70.34
64 m.p.h.	90.18	89.43	60.09	89.05	90.91	94.74	90.76	89.55	90.83	88.89	90.68
69 m.p.h.	97.89	97.92	98.04	97.77	96.69	100.0	97.48	98.18	96.25	97.98	98.73
74 m.p.h.	99.56	99.65	99.51	99.63	100.0	100.0	99.16	99.55	98.33	98.99	100.0
79 m.p.h.	99.91	99.65	99.90	99.63	100.0	100.0	99.79	100.0	99.58	100.0	100.0
84 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

of vehicles traveling at or less than

All Vehicles

TABLE II SPEED DATA

Station <u>1-14</u>	Highway <u>Indiana System</u>	Location _____
No. of Lanes <u>_____</u>	Type of Surface _____	Weather _____
This Observation		Last Previous Observation (Speed Report No. _____)
Date <u>_____</u>	Date <u>_____</u>	Date <u>_____</u>
Time <u>_____</u>	Time <u>_____</u>	Time <u>_____</u>

Monitoring of Speed
(Statistical Summary)

State: Indiana

Calendar Quarter Ending: December 1975

Miles**	Number of Monitor Locations	Frequency of Monitoring During Quarter	Duration of Monitoring	Average Speed (MPH)	Median Speed (MPH)	Percentile Speed (MPH)	Percent of Motorists Exceeding		
							55 MPH	60 MPH	65 MPH
Interstate Rural	699*	2	once each location	56.74	56.13	60.17	62.9	16.0	3.0
Interstate Urban	172*	1	once	58.81	58.64	62.09	80.0	32.7	4.5
Other multi-lane divided rural	688	2	once each location	57.61	57.25	61.60	69.0	26.5	4.8
Other multi-lane divided urban	228								
Undivided Rural	8,791	2	once each location	56.98	56.34	62.34	61.7	25.1	8.8
Undivided Urban	732								
State Total	11,310*	7		57.37	56.76	61.50			

* Does not include Toll Road

** State Roads only

TABLE 12. ALL VEHICLES

Monitoring of Speed
(Statistical Summary)

State: Indiana		Calendar Quarter Ending: December 1975					
Miles**	Number of Monitor Locations	Frequency of Monitoring During Quarter	Duration of Monitoring	Average Speed (MPH)	Median Speed (MPH)	85th Percentile Speed (MPH)	Percent of Motorists Exceeding
							55 MPH
Interstate Rural	699*	2	once each location	56.92	56.21	60.35	64.1
Interstate Urban	172*	1	once	58.98	58.70	62.29	64.1
Other multi-lane divided rural	688	2	once each location	58.32	57.84	62.26	67.1
Other multi-lane divided urban	228						
Undivided Rural	8,791	2	once each location	57.42	56.62	62.48	63.8
Undivided Urban	732						
State Total	11,310*	7					
					57.77	57.05	61.75

* Does not include Toll Road

** State Roads only

TABLE 13. PASSENGER CARS

Monitoring of Speed
(Statistical Summary)

State: Indiana

Calendar Quarter Ending: December 1975

Miles**	Number of Monitor Locations	Frequency of Monitoring During Quarter	Duration of Monitoring	Average Speed (MPH)	Median Speed (MPH)	85th Percentile Speed (MPH)	Percent of Motorists Exceeding	
							55 MPH	60 MPH
Interstate Rural	699*	2	once each location	56.29	55.89	59.26	60.1	12.2
Interstate Urban	172*	1	once	58.35	58.47	61.63	80.5	28.0
Other multi-lane divided rural	688	2	once each location	55.79	55.75	59.82	58.2	14.1
Other multi-lane divided urban	228							1.8
Undivided Rural	8,791	2	once each location	55.80	55.58	61.86	56.4	21.4
Undivided Urban	732							8.6
State Total	11,310*	7			56.32	56.06	60.66	

* Does not include Toll Road

** State Roads only

TABLE 14. ALL TRUCKS

COVER DESIGN BY ALDO GIORGINI